

## ABSTRACT

The present invention provides a method of generating heat using a hydrogen condensate. The hydrogen condensate comprises a plurality of metal atoms contained in a metal nano-ultrafine particle and a plurality of hydrogen isotope atoms solid-dissolved among the plurality of metal atoms. At least two of the plurality of hydrogen isotope atoms are condensed so that the inter-atomic nuclear distance between two hydrogen isotope atoms is smaller than or equal, to the internuclear spacing of a molecule consisting of two hydrogen isotope atoms. The heat generation method comprises applying energy to the hydrogen condensate and generating heat by causing the at least two hydrogen isotope atoms to react with each other due to the energy.